

Amendments to the Specification:

Page 1, amend the paragraph beginning on line 5 to read as follows:

This is a continuation application of Serial No. 09/641,764, filed August 21, 2000, which is a continuation of application Serial No. 09/487,785, filed January 20, 2000 (now US Patent No. 6,136,401), which is a continuation of application Serial No. 08/888,124, filed July 3, 1997, (now US Patent No. 6,040,029).

Page 5, amend the paragraph beginning at line 4 to read as follows:

In order to achieve the above objects, the first feature of the present invention ~~relate~~ relates to an information recording disk comprising a film of a medium for recording information formed on at least one surface of a substrate in the shape of a disk, wherein the substrate is composed of a glass containing at least a rare earth element. The film of the medium for recording information can be formed directly on the surface of the substrate, or it can be formed indirectly on the surface of the substrate via an intermediate film (pre-coated film).

Page 6, amend the paragraph beginning at line 13 to read as follows.

The amount of the rare earth element, which can be dissolved into a glass composition ~~having~~ having a net structure, has an upper limit (a limit of solid solution). If the rare earth element is added to the in an amount glass exceeding the upper limit, the rare earth element is deposited in the glass matrix as a crystalline phase or an amorphous phase. The particles composed of the above crystalline phase or the amorphous phase are called fine particles. If the deposition of the rare earth element is not homogeneous, the fine particles can ~~tee~~ be deposited partially by exceeding the upper limit of the solid solution. Therefore, the content of the rare

earth element does not necessarily exceed the upper limit of the solid solution in the glass matrix. The rare earth element is desirably contained in both the glass matrix and the fine particles. The fine particles are desirably crystalline. Whether the fine particles are crystalline or amorphous can be readily determined by observing a lattice fringe image taken by a transmission electron microscope, because lattice stripes can be observed at the crystalline portion, but will not be observed at the amorphous portion.

Page 31, please amend the Table 7, to read as follows:

| No. | Water Resistance<br>Alkaline<br>concentration<br>(ppm) | Heat<br>resistance | Surface<br>roughness<br><del>Ra (Å)</del> <u>Ra (nm)</u> | Transmittance (%) |
|-----|--|--------------------|--|-------------------|
| 5   | 10.0   | O                  | 4  | 74.0              |
| 35  | 15.0   | O                  | 4  | 94.0              |
| 26  | 312.0  | Δ                  | 4  | 95.0              |
| 43  | 2.0  | O                  | 9  | 15.0              |
| 1   | 11.0   | O                  | 4  | 94.0              |
| 7   | 11.5   | O                  | 5  | 67.0              |
| 8   | 10.7   | O                  | 10   | 58.0              |
| 18  | 4.0  | O                  | 5  | 79.0              |

Page 32, amend the paragraph beginning on line 1, to read as follows:

The surface roughness was evaluated by an average surface roughness Ra ~~(Å)~~ Ra (nm) using a surface roughness tester. The transmittance was evaluated as an intensity ratio of incident light and transmitted light by irradiating the surface of the substrate with a white light source.

Page 32, amend the paragraph beginning on line 21 to read as follows:

Regarding the surface roughness, preferable flatness such as  ~~$Ra = 4 - 5 \text{ \AA}$~~   
 $Ra = 4 - 5 \text{ nm}$  was obtained with the glass substrates of No. 1, 7, 18, 5, 35, and 26.  
On the contrary, the surface roughness of the glass substrates of No. 8 and 43 were  
as large as  ~~$Ra = 9 - 10 \text{ \AA}$~~   $Ra = 9 - 10 \text{ nm}$ .

Page 33, amend the paragraph beginning on line 3 to read as follows:

A relationship between the surface roughness and the depositing condition of the fine particles was studied. Regarding the glass of No. 7, the content of  $\text{Er}_2\text{O}_3$  was 16% by weight, and the average particle size of the deposited fine particles was 51 nm. The volume fraction of the fine particles was 40%. The transmittance of the glass of No. 7 under the above condition was 67%. On the other hand, regarding the glass of No. 8, the content of  $\text{Er}_2\text{O}_3$  was 21% by weight, the average particle size of the deposited fine particles was 103 nm, and the volume fraction of the fine particles was 72%. The transmittance of the glass of No. 8 under the above condition was 58%. Under the above conditions, the surface roughness of the glass of No. 7 was  ~~$5.0 \text{ \AA}$~~   $5.0 \text{ nm}$ , and the glass of No. 8 was  ~~$10.0 \text{ \AA}$~~   $10.0 \text{ nm}$ , twice that of the glass of No. 7. As explained above, it was found that when the content of  $\text{Er}_2\text{O}_3$  exceeded 20% by weight, the average particle size of the deposited fine particles exceeded 100 nm, and the transmittance was less than 60%, the surface roughness of the glass was significant, and the glass was inferior in surface flatness.

Page 38, amend the paragraph beginning on line 2 to read as follows:

A magnetic disk of the shape indicated in Fig. 9 was manufactured using the glass substrate of the present invention. The thickness of the substrate was 0.38

mm. The glass of No. 5, which was not treated for chemical strengthening, was used in manufacturing the magnetic disk. The precoat film, which was generally formed in a routine operation, was not formed, and the magnetic thin film was formed directly onto the surface of the glass substrate. The surface roughness of the glass substrate  ~~$R_a = 4.0 \text{ \AA}$~~   $R_a = 4.0 \text{ nm}$ .